

SGV SERIES

UPGRADE

105°C Standard

- Load Life : 105°C 2000~5000 hours.
- AEC-Q200.
- High Temperature Reflow soldering is available. (JGV series)
(http://www.rubycon.co.jp/catalog/j_pdfs/aluminum/j_JGV.pdf)



RoHS compliance



◆ SPECIFICATIONS

Items	Characteristics																																														
Category Temperature Range	-55~+105℃				-40~+105℃				-25~+105℃																																						
Rated Voltage Range	6.3~50Vdc				63, 100Vdc				160~450Vdc																																						
Capacitance Tolerance	±20% (20℃, 120Hz)																																														
Leakage Current(MAX)	6.3~100Vdc						160~450Vdc																																								
	I=0.01CV or 3μA whichever is greater. (After 2 minutes application of rated voltage)						I=0.04CV+100μA (1 minute) I=0.02CV+25μA (5minutes)																																								
	I=Leakage Current(μA) C=Capacitance(μF) V=Rated Voltage(Vdc)																																														
Dissipation Factor(MAX) (tanδ)	<table><tr><td>Rated Voltage (Vdc)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160~250</td><td>400</td><td>450</td><td rowspan="3">(20℃, 120Hz)</td></tr><tr><td rowspan="2">tanδ</td><td>φ4,φ5,φ6.3×6.1</td><td>0.30</td><td>0.24</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>φ6.3×8,φ8~φ18</td><td>0.35</td><td>0.26</td><td>0.24</td><td>0.18</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.15</td><td>0.20</td></tr></table>												Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160~250	400	450	(20℃, 120Hz)	tanδ	φ4,φ5,φ6.3×6.1	0.30	0.24	0.20	0.16	0.14	0.12	-	-	-	-	φ6.3×8,φ8~φ18	0.35	0.26	0.24	0.18	0.14	0.12	0.10	0.15	0.20
	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160~250	400	450	(20℃, 120Hz)																																		
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φ6.3×8,φ8~φ18		0.35	0.26	0.24	0.18	0.14	0.12	0.10	0.15	0.20																																					
When rated capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.																																															
Endurance	After applying rated voltage with rated ripple current for specified time at 105℃, the capacitors shall meet the following requirements.																																														
	Capacitance Change		Within ±25% of the initial value.							Rated Voltage (Vdc)		Life Time (hrs)																																			
	Dissipation Factor		Not more than 200% of the specified value.							6.3~100		2000																																			
	Leakage Current		Not more than the specified value.							160~450		5000																																			
Low Temperature Stability Impedance Ratio(MAX)	<table><tr><td>Rated Voltage (Vdc)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160~250</td><td>400</td><td>450</td><td rowspan="3">(120Hz)</td></tr><tr><td>Z(-25℃)/Z(20℃)</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>3</td><td>6</td></tr><tr><td>Z(-40℃)/Z(20℃)</td><td>8</td><td>8</td><td>4</td><td>4</td><td>3</td><td>3</td><td>5</td><td>5</td><td>-</td><td>-</td></tr></table>												Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160~250	400	450	(120Hz)	Z(-25℃)/Z(20℃)	4	3	2	2	2	2	2	2	3	6	Z(-40℃)/Z(20℃)	8	8	4	4	3	3	5	5	-	-
	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160~250	400	450	(120Hz)																																		
	Z(-25℃)/Z(20℃)	4	3	2	2	2	2	2	2	3	6																																				
Z(-40℃)/Z(20℃)	8	8	4	4	3	3	5	5	-	-																																					

◆ MULTIPLIER FOR RIPPLE CURRENT

Frequency(Hz)		60(50)	120	500	1k	10k≤
Coefficient	0.47~1μF	0.50	1.00	1.20	1.30	1.50
	2.2~6.8μF	0.65	1.00	1.20	1.30	1.50
	10~68μF	0.80	1.00	1.20	1.30	1.50
	100~1000μF	0.80	1.00	1.10	1.15	1.20
	2200~6800μF	0.80	1.00	1.05	1.10	1.15

◆ PART NUMBER

□□□ SGV □□□□□ M □□□ D×L
 Rated Voltage Series Capacitance Capacitance Tolerance Option Case Size

◆ DIMENSIONS

(mm)

Technical drawing of a capacitor showing dimensions. The drawing includes a side view and a top view. The side view shows the length L, the diameter φD, and the maximum diameter φD+0.5MAX. The top view shows the width W1, the distance between mounting holes P, the distance from the mounting hole to the edge K, the distance from the mounting hole to the center of the capacitor B1, and the distance from the mounting hole to the edge of the capacitor A1. The distance from the mounting hole to the edge of the capacitor is also labeled as 0.3MAX. The drawing also shows the distance from the mounting hole to the center of the capacitor B1±0.2.

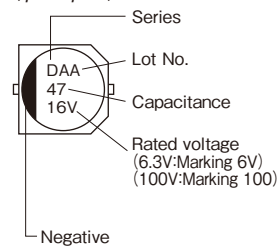
φD	L	A1	B1	C	W1	P	K	α
4	6.1	4.3	4.3	1.8	0.5~0.8	1.0	0.5 MAX	0
5	6.1	5.3	5.3	2.2	0.5~0.8	1.3	0.5 MAX	0
6.3	6.1	6.6	6.6	2.7	0.5~0.8	1.8	0.5 MAX	0
6.3	8	6.6	6.6	2.7	0.5~0.8	1.8	0.5 MAX	0
8	6.5	8.3	8.3	3.4	0.5~0.8	2.2	0.5 MAX	0
8	10.5	8.3	8.3	2.9	0.8~1.1	3.1	0.5 MAX	※1
10	10.5	10.3	10.3	3.2	0.8~1.1	4.5	0.5 MAX	※1
12.5	13.5	13	13	4.9	0.8~1.1	4.5	0.7±0.4	0.5
12.5	16	13	13	4.9	0.8~1.1	4.5	0.7±0.4	0.5
16	16.5	17	17	6	1.0~1.6	6.8	0.7±0.4	0.5
16	21.5	17	17	6	1.0~1.6	6.8	0.7±0.4	0.5
18	16.5	19	19	7	1.0~1.6	6.8	0.7±0.4	0.5
18	21.5	19	19	7	1.0~1.6	6.8	0.7±0.4	0.5

※1: α dimensions

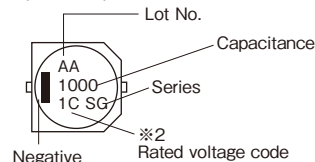
Rated Voltage	α
6.3~100	0
160~400	0.2

◆ MARKING

〈φ4~φ10〉



〈φ12.5~φ18〉



※2 Voltage code

Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	100	160	200	250	400	450
Rated Voltage code	0J	1A	1C	1E	1V	1H	1J	2A	2C	2D	2E	2G	2W

◆ STANDARD SIZE

 Size $\phi D \times L$ (mm), Rated Ripple Current (mA r.m.s./105°C, 120Hz)

Vdc	Cap (μF)	Size (φDXL)	Ripple	Vdc	Cap (μF)	Size (φDXL)	Ripple	Vdc	Cap (μF)	Size (φDXL)	Ripple	
6.3	22	4×6.1	26	35	4.7	4×6.1	15	160	12	8×10.5	115	
	33	4×6.1	29		10	5×6.1	28		22	10×10.5	150	
	47	5×6.1	46		22	6.3×6.1	55		39	12.5×13.5	250	
	100	6.3×6.1	71		33	6.3×8	76		47	12.5×16	310	
	220	6.3×8	121			8×6.5	84		68	16×16.5	400	
	470	8×10.5	210		100	8×10.5	180		100	18×16.5	480	
	1000	10×10.5	495			10×10.5	305		120	16×21.5	560	
		12.5×13.5			450	150	18×21.5		690			
	2200	12.5×16	750			12.5×13.5	200	10	8×10.5	100		
	3300	16×21.5	930		330	12.5×16		460	15	10×10.5	130	
18×16.5		490		33	12.5×13.5	230						
4700	18×21.5	1200	1000	16×21.5	750	42		12.5×16	270			
6800	18×21.5	1350		18×16.5		56		16×16.5	350			
10	33	5×6.1	43	50	0.47	4×6.1		4	250	6.8	8×10.5	85
	100	6.3×6.1	71		1	4×6.1		8		12	10×10.5	115
	330	8×10.5	195		2.2	4×6.1		11		22	12.5×13.5	190
	470	8×10.5	210		3.3	4×6.1	14	33		12.5×16	240	
		10×10.5	440		4.7	5×6.1	19	47		16×16.5	320	
	1000	12.5×16	500		10	6.3×6.1	35	56		18×16.5	400	
	2200	16×16.5	810		22	6.3×8	67	68		16×21.5	450	
	3300	16×21.5	1000			8×6.5	70	100		18×21.5	560	
		18×16.5			33	8×10.5	140	400	2.7	8×10.5	45	
	4700	18×21.5	1200		47	8×10.5	167		4.7	10×10.5	75	
16	10	4×6.1	28	10×10.5		180	10		12.5×13.5	135		
	22	5×6.1	39	100	8×10.5	230	12		12.5×16	165		
	47	6.3×6.1	70		10×10.5	315	18		16×16.5	220		
	100	6.3×8	111	220	12.5×16	380	22		18×16.5	280		
	220	8×10.5	185	330	16×16.5	470	33		16×21.5	320		
	330	8×10.5	290	470	16×21.5	550	47		18×21.5	400		
		10×10.5	440		1000		18×21.5	820	450	6.8	12.5×13.5	110
	470	8×10.5	320	63	22	8×10.5	55	8.2		12.5×16	150	
		10×10.5	460		33	8×10.5	115	12		16×16.5	195	
	1000	16×16.5	630		47	8×10.5	120	18		18×16.5	245	
2200	16×21.5	930	100		12.5×16	225	22	16×21.5		275		
	18×16.5		220		16×16.5	385	27	18×21.5		345		
3300	18×21.5	1150	330		16×21.5	490	100	10		8×10.5	65	
33	6.3×6.1	65			470			18×21.5	590	22	10×10.5	90
	47	6.3×8	79		100	8×10.5		65	33	10×10.5	135	
8×6.5		91	47	12.5×13.5		160		100	16×16.5	285		
100	8×10.5	180	220	16×21.5	440	25		220	18×21.5	1050		
220	8×10.5	320		330				18×16.5	450	3300	18×21.5	1700
	10×10.5	355	330	10×10.5	450			1000	16×21.5	700		
12.5×13.5	490	18×16.5										
470	10×10.5	490	2200	18×21.5	1050							
25	3300	18×21.5	1700									

Mouser Electronics

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[50SGV22M8X6.5](#) [6.3SGV3300M16X21.5](#) [6.3SGV470M8X10.5](#) [63SGV330M16X21.5](#) [63SGV33M8X10.5](#)
[6.3SGV6800M18X21.5](#) [6.3SGV47M5X6.1](#) [63SGV100M12.5X16](#) [50SGV0R47M4X6.1](#) [50SGV470M18X16.5](#)
[50SGV47M10X10.5](#) [50SGV47M8X10.5](#) [50SGV4R7M5X6.1](#) [6.3SGV33M4X6.1](#) [25SGV2200M18X21.5](#)
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[450SGV33M18X21.5](#) [50SGV1M4X6.1](#) [50SGV1000M18X21.5](#) [50SGV100M8X10.5](#) [50SGV330M16X16.5](#)
[16SGV330M8X10.5](#) [50SGV2R2M4X6.1](#) [6.3SGV100M6.3X6.1](#) [63SGV330M18X16.5](#) [200SGV100M16X21.5](#)
[250SGV6R8M8X10.5](#) [35SGV220M10X10.5](#) [6.3SGV4700M18X21.5](#) [63SGV470M18X21.5](#) [6.3SGV2200M12.5X16](#)
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[250SGV22M12.5X13.5](#) [25SGV1000M18X16.5](#) [250SGV100M18X21.5](#) [25SGV47M8X6.5](#) [16SGV1000M16X16.5](#)

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